WHAT IS CLAIMED IS:

1. A light diffuser comprising a polymeric film wherein the film comprises a plurality of layers having void geometry in which the x/y/z size or frequency varies by at least 28% between at least two layers.

2. The light diffuser of Claim 1 wherein the polymeric film comprises two voided layers.

3. The light diffuser of Claim 1 wherein the polymeric film contains at least two voided layers and at least one non-voided layer.

4. The light diffuser of Claim 3 wherein the voided and non-voided layers are integral.

5. The light diffuser of Claim 3 wherein the polymeric film the non-voided layer further comprises addenda.

6. The light diffuser of Claim 1 wherein the polymeric film contains at least two voided layers that are separated by a non-voided layer.

7. The light diffuser of Claim 1 wherein the said plurality of voided layers that vary in geometry or frequency improve the diffuse light transmission efficiency compared to a single voided layer of the same thickness and either void geometry or frequency by at least 10% at 500 nm.

8. The light diffuser of Claim 1 wherein microvoids have a substantially circular cross-section in a plane perpendicular to the direction of light travel.

9. The light diffuser of Claim 1 wherein the x/y/z size or frequency of the voids vary by between 28% and 300% between at least two layers.

10. The light diffuser of Claim 1 wherein the x/y/z size or frequency of the voids vary by at least 60% between at least two layers.

11. The light diffuser of Claim 1 wherein the voided layers are arranged in order of increasing size of voids in reference to the light passing through the film.

12. The light diffuser of Claim 1 wherein the voided layers are arranged in order of decreasing size of voids in reference to the light passing through the film.

13. The light diffuser of Claim 1 wherein the voided layers are arranged in order of increasing frequency of voids in reference to the light passing through the film.

14. The light diffuser of Claim 1 wherein the voided layers are arranged in order of decreasing frequency of voids in reference to the light passing through the film.

15. The light diffuser of Claim 1 wherein the film contains at least one polymeric skin layer.

16. The light diffuser of Claim 1 wherein the difference in refractive index between the thermoplastic polymeric material and the microvoids is greater than 0.2.

17. The light diffuser of Claim 1 wherein said microvoids are formed by organic microspheres.

18. The light diffuser of Claim 1 wherein the microvoids contain cross-linked polymer beads.

19. The light diffuser of Claim 1 wherein the microvoids contain a gas.

20. The light diffuser of Claim 1 wherein the elastic modulus of the light diffuser is greater than 500 MPa .

21. The light diffuser of Claim 1 wherein said diffuse light transmission efficiency is greater than 80% at 500 nm.

22. The light diffuser of Claim 1 wherein said diffuse light transmission efficiency is greater than 87% at 500 nm.

23. The light diffuser of Claim 1 wherein said microvoids have a major axis diameter to minor axis diameter ratio of less than 2.0.

24. The light diffuser of Claim 1 wherein said microvoids have a major axis diameter to minor axis diameter ratio of between 1.0 and 1.6.

25. The light diffuser of Claim 1 wherein said thermoplastic layers contain greater than 4 index of refraction changes greater than 0.20 parallel to the direction of light travel.

26. The light diffuser of Claim 1 wherein said microvoids have a average volume of between 8 and 42 cubic micrometers over an area of 1 cm^2.

27. The light diffuser of Claim 1 wherein the said light diffuser has a thickness less than 250 micrometers.

28. The light diffuser of Claim 1 wherein said thermoplastic layer comprises polyolefin polymer.

29. The light diffuser of Claim 1 wherein said thermoplastic layer comprises polyester polymer.

30. The light diffuser of Claim 18 wherein said cross linked polymer beads have a mean particle size less than 2.0 micrometers.

31. The light diffuser of Claim 18 wherein said cross linked polymer beads have a mean particle size between 0.30 and 1.7 micrometers.

32. A back lighted imaging media comprising a light source and a polymeric film incorporating microvoids wherein the film comprises a plurality of layers having void geometry in which the x/y/z size or frequency varies by at least 28% between at least two layers.

33. An liquid crystal device comprising a light source and a polymeric film incorporating microvoids wherein the film comprises a plurality of layers having void geometry in which the x/y/z size or frequency varies by at least 28% between at least two layers.

34. A liquid crystal device component comprising a light source and a polymeric film incorporating microvoids wherein the film comprises a plurality of layers having void geometry in which the x/y/z size or frequency varies by at least 28% between at least two layers.